Paper No. 20

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte DAVID P. SCHULTZ

_____

Appeal No. 97-0984
Application 08/546,345[1]

_____

ON BRIEF

_____

Before JERRY SMITH, HECKER, and FRAHM, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-5, which constitute all the claims in the application. After the

[1] Application for patent filed October 20, 1995. According to appellant, this application is a continuation of Application 08/194,552, filed February 10, 1994.

appeal brief was filed, the examiner indicated that claim 5 contained allowable subject matter and withdrew the rejection of claim 5 [answer, page 5]. Therefore, this appeal is now limited to the rejection of claims 1-4.

The disclosed invention pertains to a power-on reset circuit for resetting components of an integrated circuit upon initiation of power to the integrated circuit or when the supply voltage falls sufficiently during operation that the circuit operation might be affected. One feature of the invention is that the power-on reset circuit draws no current in the steady state. Another feature of the invention is that the power-on reset signal can remain high for a relatively long period of time.

Representative claim 1 is reproduced as follows:

1. A power-on reset circuit comprising:

a reference node;

a voltage level detector for pulling down a reference voltage at said reference node when a supply voltage is not above ground voltage by a first predetermined level; and

a current source for applying a current to said reference node when said supply voltage is above a second predetermined level;

an inverter receiving an input signal from said reference node, said inverter having a threshold voltage sufficiently higher than a residual voltage to which said reference node discharge when said supply voltage is not above said first predetermined level that said residual voltage at said reference node will cause said inverter to provide a logical 1 output signal;

said inverter comprising:

a PMOS transistor, a first NMOS transistor, and a second NMOS transistor connected in series, said PMOS transistor connected to said supply voltage and said second NMOS transistor connected to said ground voltage, and

means for turning on said second NMOS transistor.

The examiner relied on the following references in the final rejection:

Mahabadi	4,885,476	Dec. 05, 1989
Shay	5,323,067	June 21, 1994 (filed Apr. 14, 1993)
Crafts	5,444,401	Aug. 22, 1995 (effectively filed Dec. 28, 1992)

The examiner cited the following additional references in the examiner's answer:

Masuoka	4,460,835	July 17, 1984
Ludwig	5,115,150	May 19, 1992

Claims 1-4 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Shay or Mahabadi in view of Crafts[2].

Rather than repeat the arguments of appellant or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness properly relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the

[2] Since the newly cited Masuoka and Ludwig references have not been applied in the statement of the rejection, we have not considered these references in determining the propriety of the rejection. See In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970).

examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence properly relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention
as set forth in claims 1-4. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to

one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

With respect to independent claim 1, the examiner cites Shay and Mahabadi as each teaching all the features of claim 1 except for the details of the inverter set forth in the last seven lines of the claim. The examiner notes that an inverter as recited in claim 1 was notoriously well-known in the art and was used for conserving power [answer, pages 3-4]. The examiner points to Masuoka and Ludwig to support

this contention (note footnote 2 above). The examiner then notes that even though Crafts does not teach anything about power conservation, the artisan would recognize that the Crafts structure "can be" used in the Shay or Mahabadi power-on reset circuit [id., page 4].

Appellant first argues that there is no suggestion in any of Mahabadi, Shay or Crafts to modify the inverter circuits disclosed in Mahabadi or Shay to conserve power in the operation of their inverters. We note that the only cited references dealing with the question of conserving power in an inverter are the unapplied Masuoka and Ludwig references. As noted above, we will not consider these references since they were not indicated in the statement of the rejection. Therefore, the motivation to modify the Shay or Mahabadi inverter to be like the Crafts inverter must come from one of these three references or other knowledge generally available to the artisan.

The purpose of the inverter in Crafts is to limit the output current of a driver independent of the supply voltage, load capacitance, temperature and other processing variables

as long as they are in a normal range. Appellant argues that this purpose of Crafts is unlikely to lead to power conservation [brief, page 7]. We agree with appellant. There is no evidence on this record that the Crafts inverter would result in any power savings if substituted for the inverters of Shay or Mahabadi. Thus, the motivation asserted by the examiner for combining the teachings of Crafts with either Shay or Mahabadi is not suggested by any of the applied references. Therefore, the only reason to make the substitution proposed by the examiner would be to improperly reconstruct the invention in hindsight based on appellant's own disclosure. Since we find no suggestion within the applied prior art for combining their teachings in the claimed manner, we do not sustain the rejection of independent claim 1. Consequently, we also do not sustain the rejection of dependent claims 2-4.

Although appellant makes several additional arguments regarding the propriety of the rejection even if Crafts is properly combined with Shay or Mahabadi, we need not consider these arguments in view of our determination above that there

is no suggestion to combine the teachings of these references.

The decision of the examiner rejecting claims 1-4 is reversed.

REVERSED

JERRY SMITH Administrative Patent Judge	)	
STUART N. HECKER Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ERIC S. FRAHM Administrative Patent Judge	)	

JS/cam

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